FOR TRIANGLE, ELECTRIC CURRENTS ARE CALCULATED FROM VERTEXES TO OPPOSITE SIDE DIRECTIONS

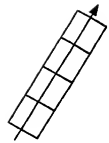
FOR QUADRILATERAL, ELECTRIC CURRENTS IN OPPOSITE SIDE DIRECTIONS ARE CALCULATED

FIG. 1 PRIOR ART

10057587.012902

FOR TRIANGLE, ELECTRIC CURRENT FLOWS UNEVENLY, AND PROPAGATION DELAY OCCURS
(ANALYSIS ACCURACY: LOW)

FIG. 2A PRIOR ART



FOR QUADRILATERAL, ELECTRIC CURRENT SMOOTHLY FLOWS
(ANALYSIS ACCURACY: HIGH)

FIG. 2B PRIOR ART

1005787 01250P

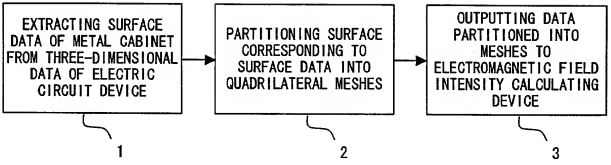


FIG. 3

1005887-012502

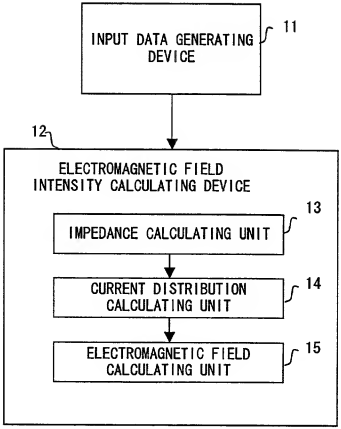
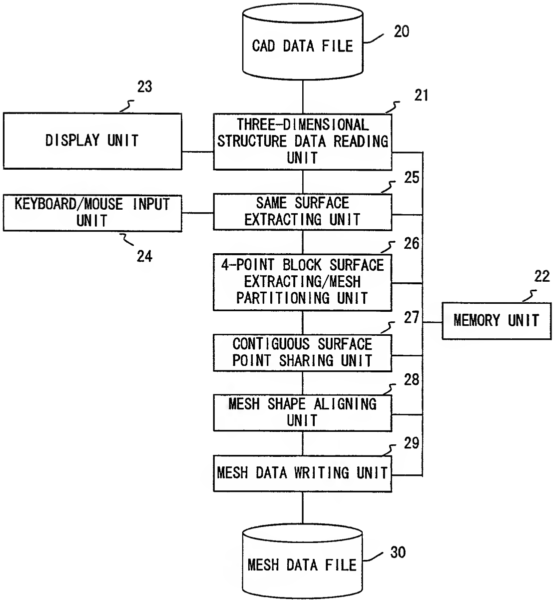


FIG. 4


CAD DATA FILE
20
23
21
DISPLAY UNIT
THREE-DIMENSIONAL STRUCTURE DATA READING UNIT
25
KEYBOARD/MOUSE INPUT UNIT
SAME SURFACE EXTRACTING UNIT
24
26
4-POINT BLOCK SURFACE EXTRACTING/MESH PARTITIONING UNIT
22
27
MEMORY UNIT
CONTIGUOUS SURFACE POINT SHARING UNIT
28
MESH SHAPE ALIGNING UNIT
29
MESH DATA WRITING UNIT
MESH DATA FILE
30

F I G. 5

10057887.012002

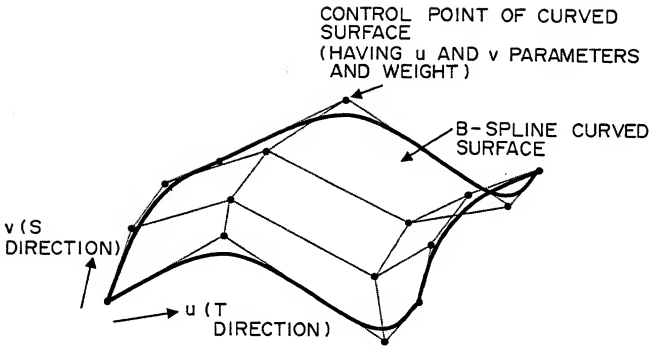


FIG. 6

NAME	SUMMARY
ENTITY ID	SURFACE NUMBER OF B-SPLINE CURVED SURFACE
K1	SUPERSCRIPT OF TOTAL SUM SYMBOL IN S DIRECTION
K2	SUPERSCRIPT OF TOTAL SUM SYMBOL IN T DIRECTION
M1	ORDER OF BASE FUNCTION
M2	ORDER OF BASE FUNCTION
PROP1	PARAMETER 1 INDICATING STATE OF CURVED SURFACE
PROP2	PARAMETER 2 INDICATING STATE OF CURVED SURFACE
PROP3	PARAMETER 3 INDICATING STATE OF CURVED SURFACE
PROP4	PARAMETER 4 INDICATING STATE OF CURVED SURFACE
PROP5	PARAMETER 5 INDICATING STATE OF CURVED SURFACE
S(-M1)	NOT SEQUENCE VALUE IN S DIRECTION
～	
T(-M2)	NOT SEQUENCE VALUE IN T DIRECTION
～	
W(0,0)	WEIGHT
～	
X(0,0)	SPATIAL COORDINATE VALUE OF EACH CONTROL POINT(X)
Y(0,0)	SPATIAL COORDINATE VALUE OF EACH CONTROL POINT(Y)
Z(0,0)	SPATIAL COORDINATE VALUE OF EACH CONTROL POINT(Z)
～	
U(0)	START VALUE IN S DIRECTION
U(1)	END VALUE IN S DIRECTION
V(0)	START VALUE IN T DIRECTION
V(1)	END VALUE IN T DIRECTION

FIG. 7

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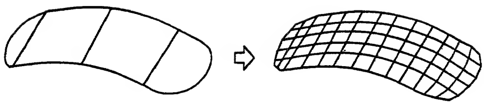

FIG. 8

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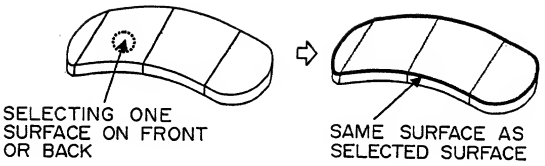


FIG. 9

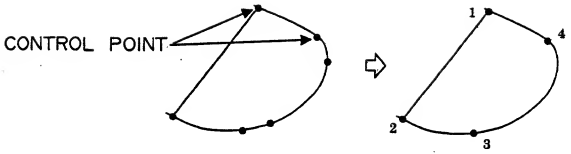


FIG. 10

10057887.012902

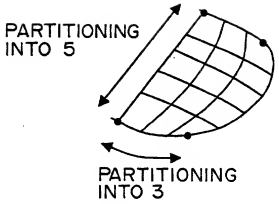


FIG. 11

10057887.012902

10057367.012902

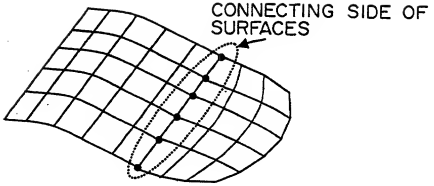


FIG. 12

10057887-012902

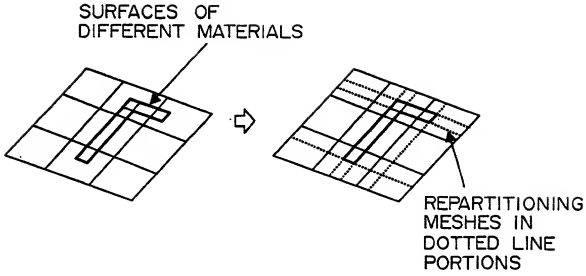


FIG. 13

10057887-012902

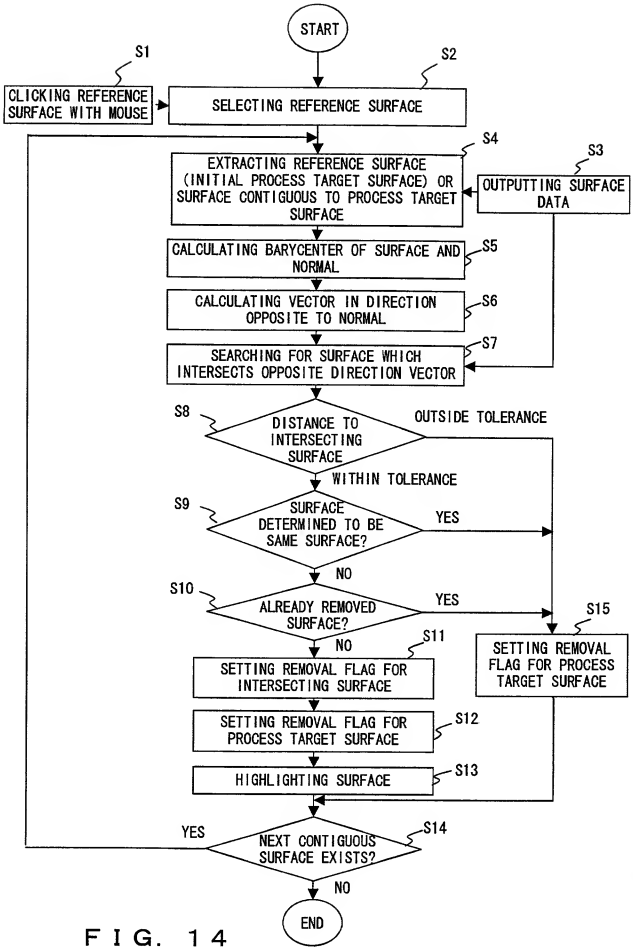


FIG. 14

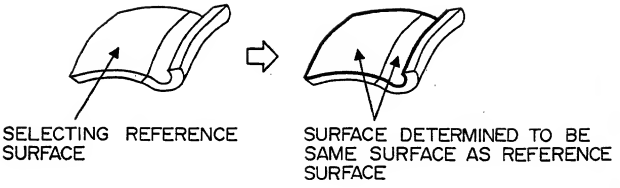


FIG. 15

10057867 - 012902

10057887.012902

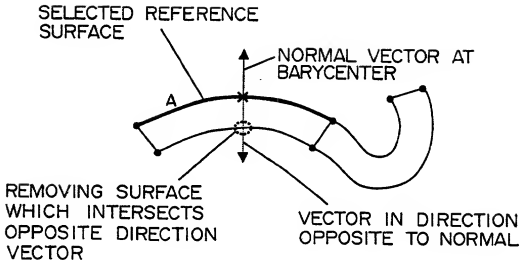


FIG. 16

10057887.012902

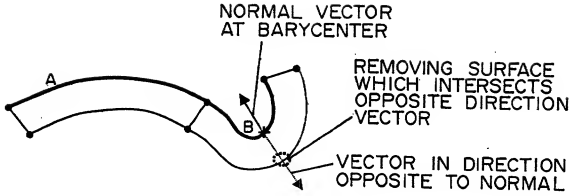
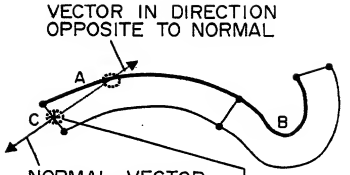


FIG. 17

10057887.012902



※
IF SURFACE INTERSECTING OPPOSITE DIRECTION VECTOR IS SURFACE WHICH HAS ALREADY DETERMINED TO BE SAME SURFACE, SIDE C ITSELF IS REMOVED

FIG. 18

10057887.012502

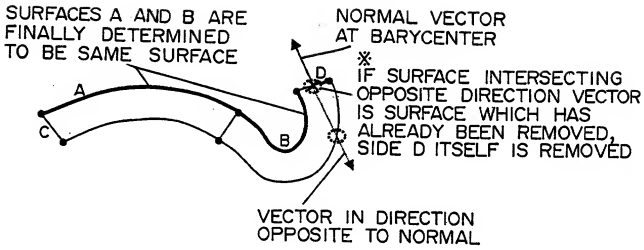


FIG. 19

10057897.012502

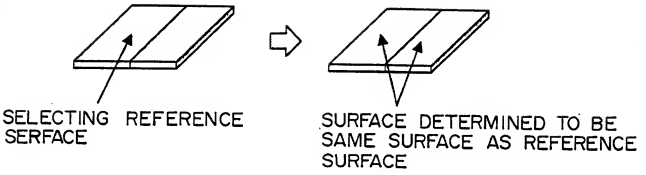


FIG. 20

10057807.012902

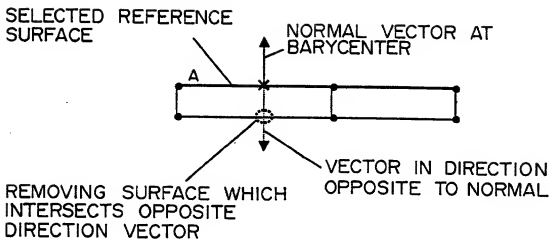


FIG. 21

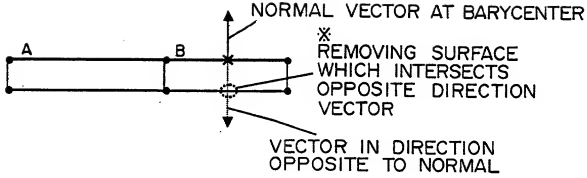


FIG. 22

1005768?.012902

10057887-012902

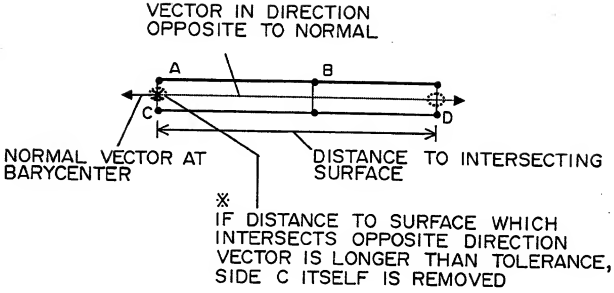


FIG. 23

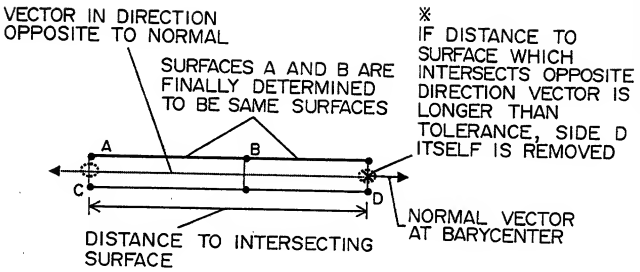
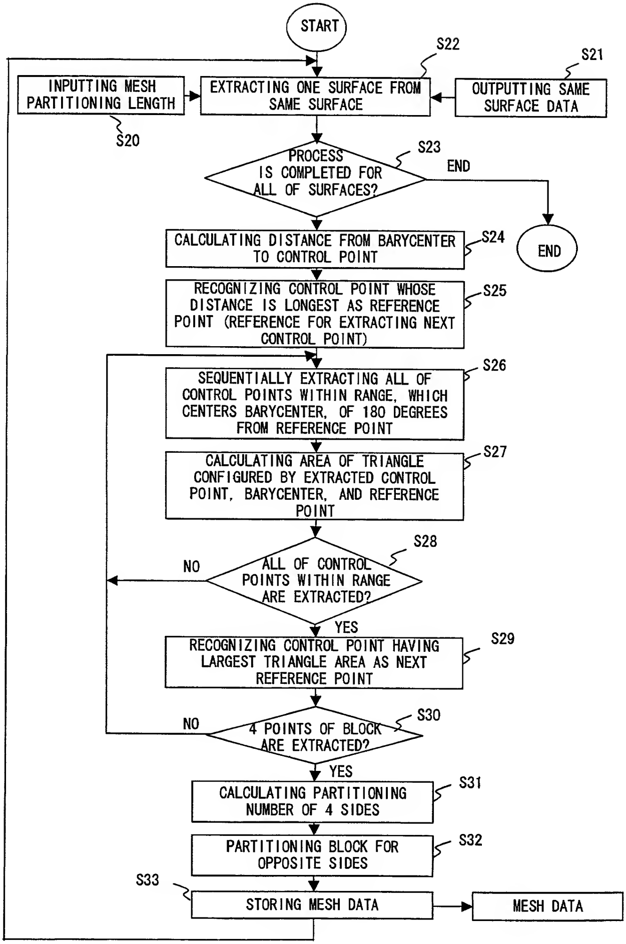


FIG. 24

10057667.012002


START
S22
S21
INPUTTING MESH PARTITIONING LENGTH
EXTRACTING ONE SURFACE FROM SAME SURFACE
OUTPUTTING SAME SURFACE DATA
S20
S23
PROCESS IS COMPLETED FOR ALL OF SURFACES?
END
CALCULATING DISTANCE FROM BARYCENTER TO CONTROL POINT
S24
END
RECOGNIZING CONTROL POINT WHOSE DISTANCE IS LONGEST AS REFERENCE POINT (REFERENCE FOR EXTRACTING NEXT CONTROL POINT)
S25
SEQUENTIALLY EXTRACTING ALL OF CONTROL POINTS WITHIN RANGE, WHICH CENTERS BARYCENTER, OF 180 DEGREES FROM REFERENCE POINT
S26
CALCULATING AREA OF TRIANGLE CONFIGURED BY EXTRACTED CONTROL POINT, BARYCENTER, AND REFERENCE POINT
S27
S28
NO
ALL OF CONTROL POINTS WITHIN RANGE ARE EXTRACTED?
YES
RECOGNIZING CONTROL POINT HAVING LARGEST TRIANGLE AREA AS NEXT REFERENCE POINT
S29
NO
4 POINTS OF BLOCK ARE EXTRACTED?
S30
YES
CALCULATING PARTITIONING NUMBER OF 4 SIDES
S31
PARTITIONING BLOCK FOR OPPOSITE SIDES
S32
S33
STORING MESH DATA
MESH DATA

F I G. 2 5

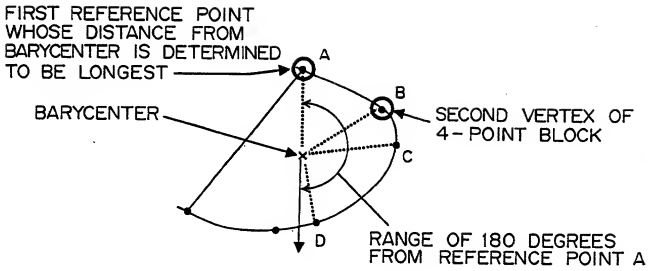


FIG. 26

10057887.012902

10057887.012902

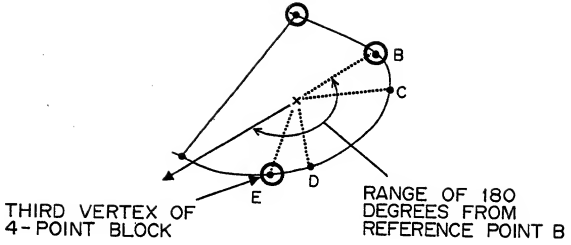


FIG. 27

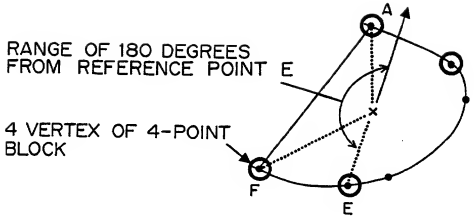


FIG. 28

10057887.012902

1005788/0125902

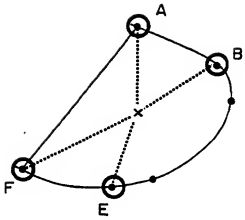


FIG. 29

10057607.012902

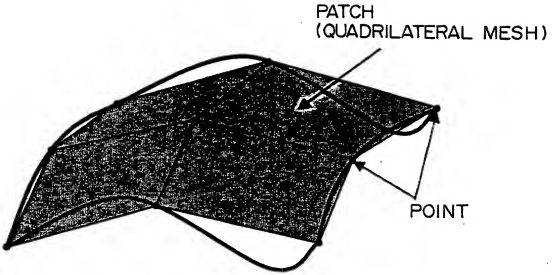


FIG. 30

COORDINATE SPECIFICATION DATA OF POLYGON VERTEX: $point

<KEYWORD・STATEMENT>
$point
<DATA・STATEMENT>
Point no. POINT NUMBER
X X COORDINATE VALUE
Y Y COORDINATE VALUE
Z Z COORDINATE VALUE
<DESCRIPTION EXAMPLE>
$point
1 0.035 0.012 0.8

SPECIFICATION DATA OF POLYGON CONFIGURING POINT: $patch

<KEYWORD・STATEMENT>
$patch
<DATA・STATEMENT>
Patch no. PATCH NUMBER
Point 1 POINT NUMBER WHICH BECOMES FIRST CONFIGURING POINT OF PATCH
Point 2 POINT NUMBER WHICH BECOMES SECOND CONFIGURING POINT OF PATCH
Point 3 POINT NUMBER WHICH BECOMES THIRD CONFIGURING POINT OF PATCH
Point 4 POINT NUMBER WHICH BECOMES FOURTH CONFIGURING POINT OF PATCH
<DESCRIPTION EXAMPLE>
$patch
1 10 11 12 13

FIG. 31

1005798/0129

1005787-012902

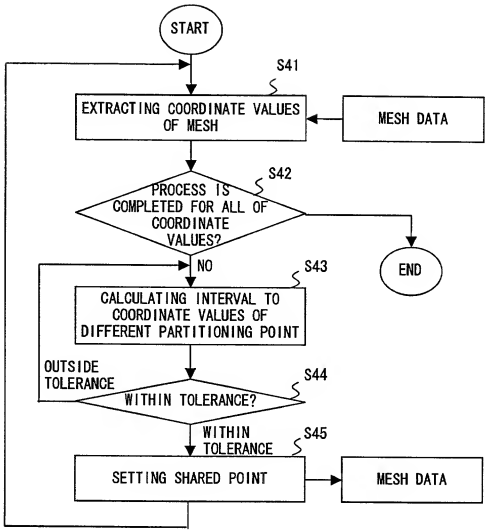


FIG. 32

10057887.012502

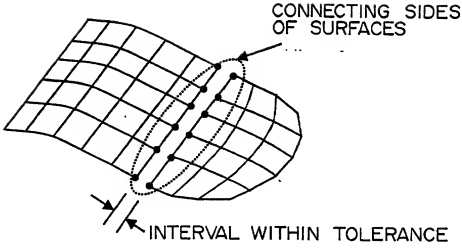


FIG. 33

1005766701259E2

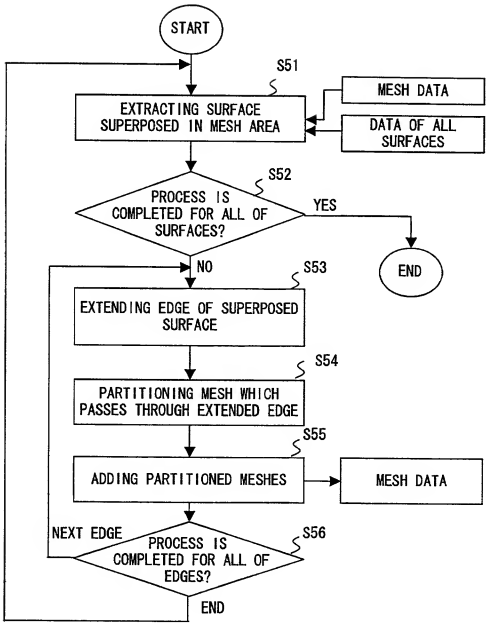


FIG. 34

10057887.012902

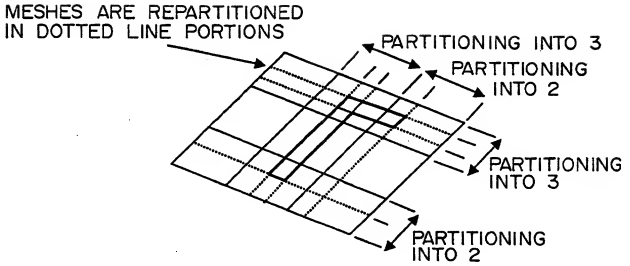


FIG. 35

10057887-012502

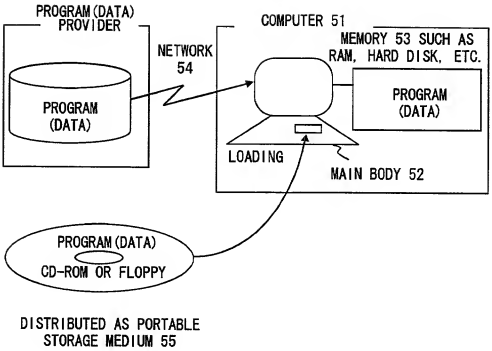


FIG. 36